Reaction

REACTANTS: Alkene and HBr (Hydrogen Bromide)

PRODUCT(S): Bromoalkane

REACTION TYPE: Electrophilic Addition

REACTION: (example of ethene)

Mechanism

HBr acts as an electrophile because its hydrogen atom (with a partial positive charge) accepts an electron pair from the carbon-carbon double bond. During the reaction the carbon-carbon double bond breaks, forming a postively charged carbon ion (carbocation). The negatively charged bromide ion bonds with the carbocation. HBr is 'added' across the carbon-carbon double bond. **Addition reaction.**

Notes:

- If a primary or secondary carbocation can be formed during the reaction, the secondary carbocation will form more readily than the primary carbocation - creating 'major' and 'minor' products*.
- The secondary carbocation is more stable due to increased positive inductive effect from neighbouring alkyl chains.
- *The product mixture will contain more of the major product than the minor product.



